

Cancer-related Behavioral Risk Factors

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Background of Cancer-related Behavioral Risk Factors

Certain behaviors such as individual cancer screening practices and lifestyle choices are relevant to the incidence, morbidity and mortality of breast, cervical, colorectal, lung and prostate cancers. Data collected on such behaviors are presented in this section of the report.

Behavior data for Michigan residents were obtained from the Michigan Department of Community Health's Behavioral Risk Factor Surveillance System (BRFSS), the Michigan State Board of Education's Michigan Youth Risk Behavior Survey (YRBS), and the Special Cancer Behavioral Risk Factor Survey (SCBRFS), from the Michigan Department of Community Health and the Michigan Public Health Institute.

Michigan Behavioral Risk Factor Survey, Youth Risk Behavior Survey, and Special Cancer Behavioral Risk Factor Survey

The Michigan Behavioral Risk Factor Surveillance System (MI BRFSS) is an ongoing state-level telephone survey that the Michigan Department of Community Health regularly conducts in cooperation with the Centers for Disease Control and Prevention (CDC). Each month a random sample of approximately 200 Michigan adults 18 years or older is interviewed. Survey instruments are designed so that a core set of questions dealing with some of the main risk indicators are asked each year while additional questions about areas of importance are rotated in and out of the protocol. This design allows for more precise estimates of major risk or health promotion behaviors as well as allowing for a broad range of questions to be included. Michigan BRFSS data used in this report were collected in the years of 1990 through 2004.¹ Michigan BRFSS reports are available to the public on the Michigan Department of Community Health's website at http://www.michigan.gov/mdch/1,1607,7-132-2944_5327-12702--,00.html. In this report, MI BRFSS data are included to illustrate trends in prevalence rates over time for various behaviors relevant to cancer prevention or detection. Current rates of cervical cancer screening from the MI BRFSS are also presented.

Tables and figures of prevalence rates for risk behaviors among Michigan youth that are included in this section present data from the Youth Risk Behavior Surveillance System (YRBSS). The YRBSS was developed by the CDC to track the prevalence of health-risk behaviors among the nation's youth. The Youth Risk Behavior Survey (YRBS) has been conducted every other year by state and local education agencies across the United States since the spring of 1990 to assess the prevalence of six categories of health risk behaviors among youth grades nine through twelve. Michigan has administered this survey to students at randomly selected public schools across the state. Questions include many areas of risk behaviors from seatbelt use to illicit drug, alcohol and cigarette use, as well as questions about sexual behavior and other topics. Tobacco use and sexual activity data from the 2003 Michigan YRBS are included in this report.²

¹ Behavioral Risk Factor Surveillance Survey (1990-2002). Michigan Department of Community Health, *Health Risk Behaviors*, 1990-2003 and 2004 Michigan Behavioral Risk Factor Surveillance System Preliminary Results.

² Youth Risk Behavior Survey (2003). Centers for Disease Control and Prevention, Available: <http://www.cdc.gov/nccdphp/dash/yrebs/> [updated September 30, 2004].

All other data on current prevalence rates of cancer-related risk behaviors presented in this report are from the 2004 Special Cancer Behavioral Risk Factor Survey (SCBRFS). The SCBRFS was initiated to evaluate cancer screening practices and cancer-related issues in Michigan; specifically. The 2001-2002 SCBRFS was intended to provide baseline data needed to evaluate projects and programs carried out through the collaborative efforts of the Michigan Cancer Consortium (MCC). The SCBRFS was repeated in 2004 with a majority of the same questions. The 2004 SCBRFS provides population-based estimates of the prevalence of certain health-related behaviors that are relevant to cancer prevention or detection among Michigan residents. The 2004 data can be used to compare results against the 2001-2002 survey to assess progress at improving health-related behaviors and cancer screening in Michigan. The target population for the 2004 SCBRFS was men and women in Michigan 40 years of age or older. This age group has the highest incidence and mortality rates for the cancer sites targeted by the Michigan Cancer Consortium Initiative (MCCI) (breast, cervical, colorectal, lung and prostate cancer), and this is the age group for whom regular cancer screening is most recommended. Using telephone surveillance methodology, interviews were conducted with a sample of Michigan residents from the entire state. The sampling design over-sampled for African Americans and included targeted samples of American Indians, Hispanics, Arab Americans, and Asian Americans in order to reach enough members of each special population to allow for risk behavior rate comparisons among these special populations and the general population in Michigan. A total of 4,196 interviews were completed between May 2004 and January 2005.

Summary

Breast cancer screening

The Michigan Cancer Consortium (MCC), the Michigan Department of Community Health (MDCH) and the American Cancer Society (ACS) recommend that women over the age of 40 years have a mammogram and clinical breast exam (CBE) every year.³

Among Michigan women aged 40 years or older, 55.3% had appropriate screening according to these guidelines in 2004 (Figure 1). Among the special populations surveyed, Arab American women had the lowest prevalence of appropriate screening (43.2%); the prevalence among African American women (51.8%) was also lower than that of the general population.

Since 1991 the prevalence of women aged 40 years or older who were appropriately screened for breast cancer has increased slightly, from 49.5% in 1991 to 55.7% in 2004 (Figure 2).

Cervical cancer screening and sexual behaviors

Current MCC and MDCH cervical cancer screening recommendations are that all women should begin Pap tests starting at age 21 or at the age when sexual activity begins.⁴ Sexual activity includes any activity that puts a woman at risk for human papilloma virus (HPV), because infections with certain strains of HPV are the most important risk factor for cervical cancer.⁵

The MCC and MDCH recommend Pap tests be done at least once every three years. In 2004, 82.6% of women aged 18 years or older were screened appropriately according to these guidelines (Figure 3). However, the prevalence of appropriate cervical cancer screening peaked among 50-59 year olds and declined as age increased thereafter.

Among all women aged 18 years or older, the prevalence of appropriate cervical cancer screening did not change noticeably between 1992 and 2004 (Figure 4).

The prevalence of sexual behaviors among Michigan youth is presented in Table 1. Forty-four percent (44.0%) of ninth to twelfth grade students had ever had sexual intercourse. Of these students, 37.0% had not used a condom during their last sexual intercourse and 14.0% had sexual intercourse with four or more people during their lives. Sexual behaviors among Michigan youth do not differ significantly to that of the nation (Figure 5).

³ Michigan Cancer Consortium (MCC) Recommendations for Breast Cancer Screening, November 17, 2004 [Online]. Available at: <http://www.michigancancer.org/PDFs/EarlyDetectionRecs/MCCBreastCaGuidelines-111704.pdf>.

⁴ Michigan Cancer Consortium (MCC) Recommendations for the Early Diagnosis of Cervical Cancer, 2003 [Online]. Available at: <http://www.michigancancer.org/PDFs/EarlyDetectionRecs/MCCCervCAGuidelines-041703.pdf>.

⁵ American Cancer Society (ACS) [Online]. Available at: http://www.cancer.org/docroot/CRI/content/CRI_2_4_2X_Do_we_know_what_causes_cervical_cancer_8.asp?sitearea.

Colorectal cancer screening

Recommendations by the MCC and MDCH for colorectal cancer screening include five screening schedule options for a person at average risk for colorectal cancer.⁶ According to these guidelines, all persons at average risk should be screened for colorectal cancer starting at age 50. Appropriate screening may consist of an annual fecal occult blood test (FOBT), a sigmoidoscopy exam once every five years, a sigmoidoscopy exam once every five years with an annual FOBT, a double contrast barium enema (DCBE) once every five years, or a colonoscopy once every ten years.

In 2004, 52.7% of adults aged 50 years or older had one of the recommended colorectal cancer screening tests within the appropriate timeframe (Figure 6). Of the individual tests: 8.7% of adults aged 50 years or older had an annual FOBT and sigmoidoscopy within 5 years; 34.9% of adults aged 50 years or older had a colonoscopy within 10 years; 18.2% of adults aged 50 years or older had a DCBE within 5 years; 27.0% of adults aged 50 years or older had an annual FOBT; 21.2% of adults aged 50 years or older had a sigmoidoscopy within 5 years.

Among the special population groups surveyed, the prevalence of screening according to appropriate timeframes was generally lowest among Hispanics and Asian Americans (Table 2).

Over time, the prevalence of FOBT and having had a lower gastrointestinal endoscopic exam increased slightly (Figures 7, 8 and 9).

Lung cancer prevention

Although cigarette smoking is a risk factor for other types of cancer, it is the single most important risk factor in the development of lung cancer. According to the ACS, more than 87% of all lung cancers are attributed to smoking, and additional cases are attributed to environmental exposure to tobacco smoke.⁷

In 2004, 19.7% of the population aged 40 years or older was a current smoker (Figure 10). Of the special populations surveyed, the American Indian and Arab American populations had the highest current smoking rates; among American Indians aged 40 years or older 34.7% were current smokers and among Arab Americans in this age group, 28.2% were current smokers.

Over time, the prevalence of current smoking among adults aged 18 years or older has declined slightly since 1990 (Figure 11). Among this age group, 23.4% were current smokers in 2004.

In 2004, 49.0% of current smokers aged 40 years or older attempted to quit in the previous 12 months (Figure 12). The rates for attempting to quit were higher among some of the special populations surveyed; 50.0% of Asian Americans, 51.2% of Hispanics, 82.2% of Arab Americans, and 66.4% of African Americans had attempted to quit in the past 12 months.

⁶ Michigan Cancer Consortium (MCC) Recommendations for Breast Cancer Screening, February 2, 2005 [Online]. Available at: <http://www.michigancancer.org/PDFs/EarlyDetectionRecs/MCCColoCaGuidelines-Screening-020205.pdf>.

⁷ American Cancer Society (ACS) [Online]. Available at: http://www.cancer.org/docroot/CRI/content/CRI_2_4_2X_Do_we_know_what_causes_lung_cancer_26.asp?sitearea.

In 2003, 22.6% of Michigan youth (ninth grade through twelfth grade) were current smokers (Table 3). Tobacco use indicators among Michigan youth were similar to the nation; slightly more Michigan students tried to quit smoking than the U.S. average (Figure 13). The percent of current smokers among Michigan youth has decreased from 38.2% in 1997 to 22.6% in 2003 (Figure 14).

Prostate cancer screening

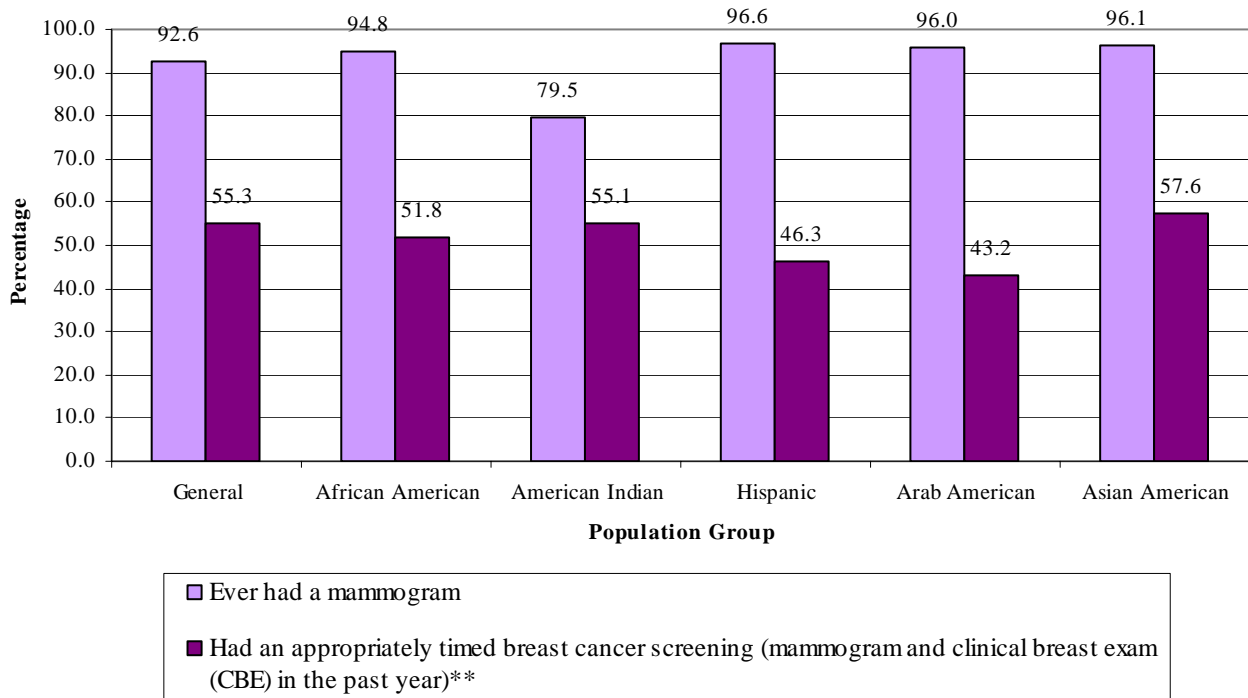
Currently the effectiveness of prostate cancer screening methods is a topic of investigation. Because prostate cancer grows very slowly, it is unknown whether treatment will help all men with prostate cancer live longer. Finding and treating prostate cancer early may help some men to live longer, but will have no impact on the life span of other men; consequent prostate cancer treatments may have an effect on a man's quality of life, causing side effects such as impotence and incontinence. The current recommendation is for men to discuss screening with their health care provider to understand their risk and advantages/disadvantages of screening as well as treatment options.

Prostate-specific antigen (PSA) testing is one method of screening for prostate cancer. During 2004, 59.3% of men aged 40 years or older had ever had a PSA test (Figure 15). Of the special populations surveyed, the percentage of men ever having had a PSA test was lower among all groups except American Indians (69.9%). Forty-nine percent (49.4%) of African Americans, 42.3% of Hispanics, 48.3% of Arab Americans, and 44.7% of Asian Americans reported ever having had a PSA test.

Figure 16 presents the percentage of Michigan men who discussed PSA testing with their doctor. Among the general population, 55.9% of men had discussed PSA testing with their doctor. Discussion of PSA testing with a doctor was least prevalent among Asian American (43.3%) and Arab American males (45.3%).

Figure 1.

Breast Cancer Screening Among Women Aged 40 Years or Older by Population Group Michigan, 2004

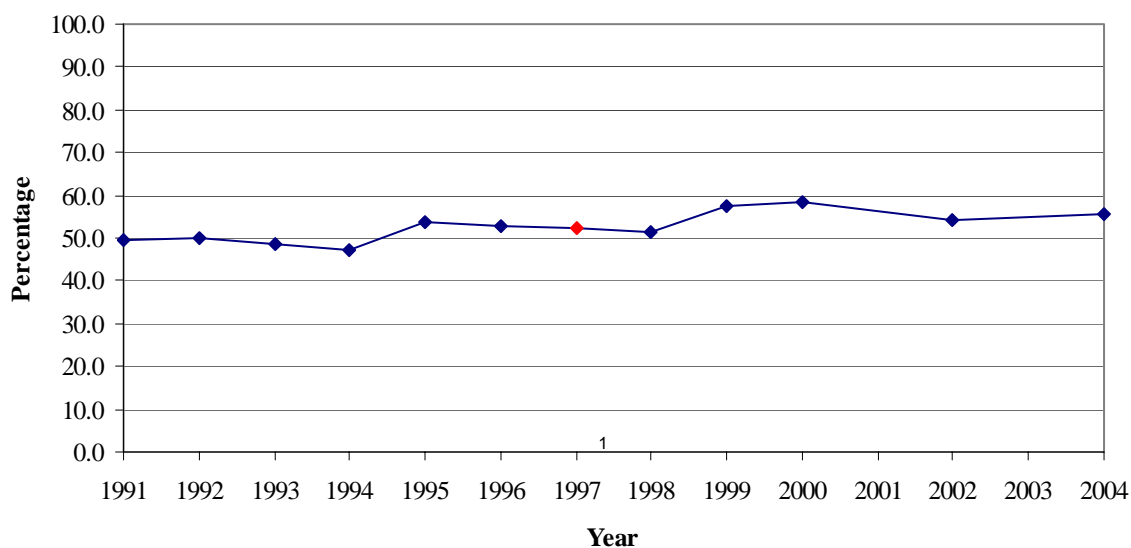


*2004 Cancer Behavioral Risk Factor Survey

**Respondents whose last breast exam was done because of a problem were not included in analysis of appropriate screening.

Figure 2.

Comparison Across Survey Years of the Percentage of Michigan Women Aged 40 Years or Older Who Had Appropriately Timed Breast Cancer Screening



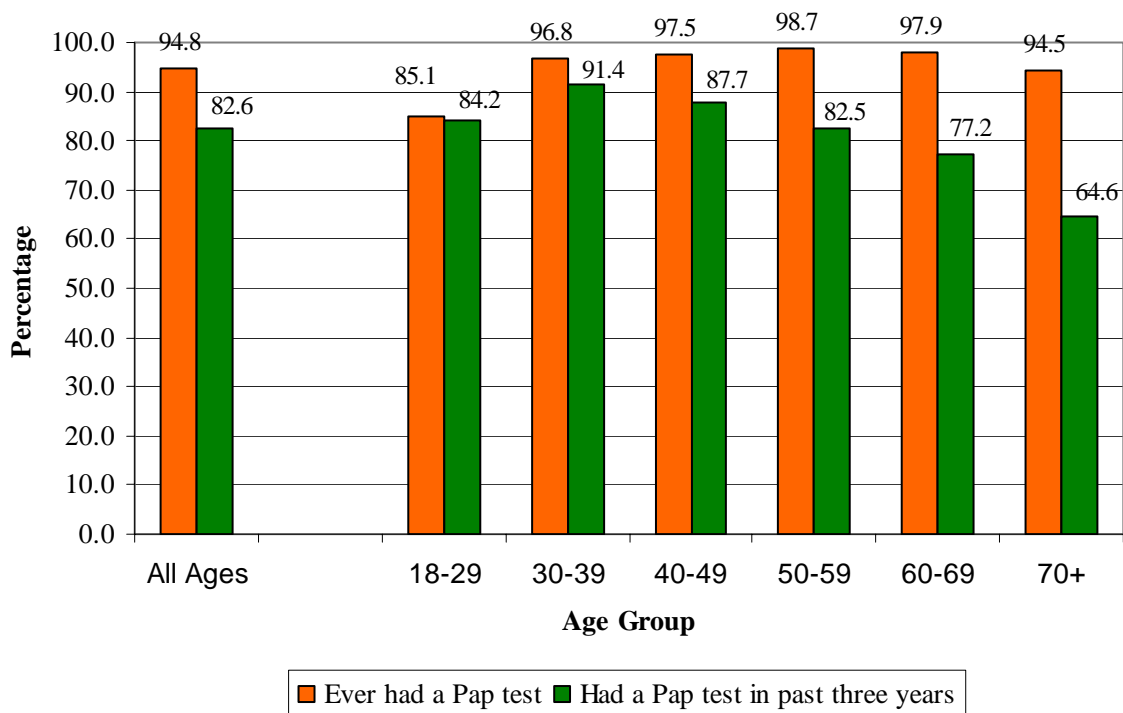
Year	Had Appropriately Timed Breast Cancer Screening ^{1,2} (%)
1991	49.5
1992	50.2
1993	48.8
1994	47.0
1995	53.9
1996	52.9
1997 ¹	55.4, 52.4
1998	51.2
1999	57.6
2000	58.4
2001	(Not asked)
2002	54.2
2003	(Not asked)
2004	55.7

¹ The ACS recommended time frame for appropriate mammography screening changed in 1997 to annually for all women 40 years of age or older. For all previous years, the recommendation was biannual screening for women aged 40 to 49 and annual screening for women aged 50+ years. As appropriate breast screening is a combination of appropriate CBE and appropriate mammography (each within the past year), this indicator changed as well.

² Respondents whose last mammogram was done because of a problem were not included in this analysis.

Figure 3.

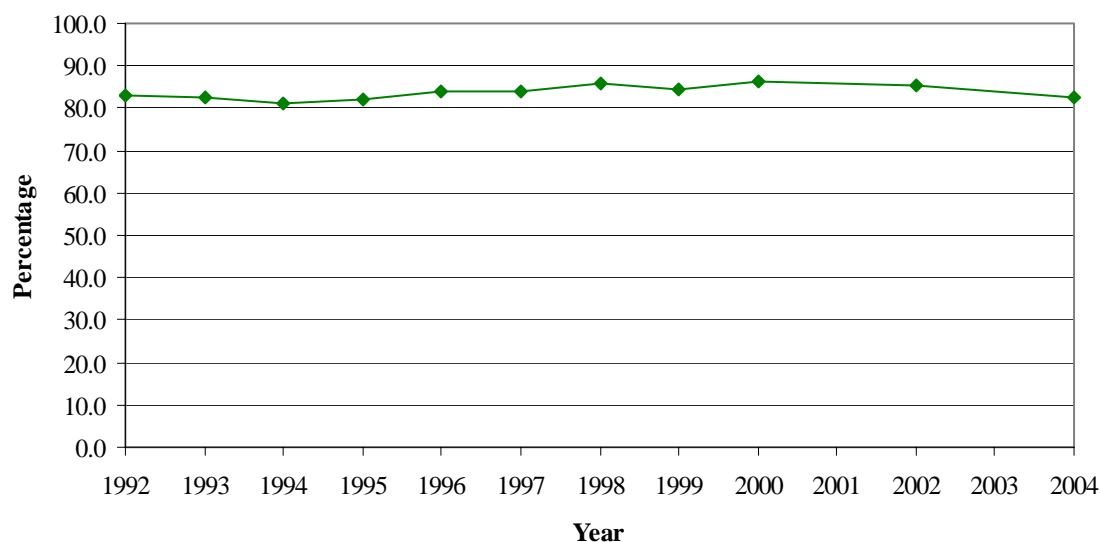
Cervical Cancer Screening Among Michigan Women Aged 18 Years or Older by Age Group, 2004*



*Respondents whose last Pap test was done because of a problem were not included in this analysis.

Figure 4.

Comparison Across Survey Years of Appropriately Timed Cervical Cancer Screening Among Michigan Women Aged 18 Years or Older



Year	Had Appropriately Timed Cervical Cancer Screening (Within Past 3 Years)* (%)
1992	83.0
1993	82.5
1994	81.2
1995	82.2
1996	84.1
1997	83.8
1998	85.8
1999	84.4
2000	86.2
2001	(Not asked)
2002	85.2
2003	(Not asked)
2004	82.6

*Respondents whose last Pap test was done because of a problem were not included in this analysis.

Table 1.

Sexual Intercourse Behaviors Among Michigan Youth, 2003

Behavior	MI (%)	Gender		Grades				Race		
		Male (%)	Female (%)	9 (%)	10 (%)	11 (%)	12 (%)	White (%)	Black (%)	Hispanic (%)
Percentage of students who ever had sexual intercourse	44.0	45.0	42.0	29.0	37.0	52.0	61.0	39.0	67.0	53.0
Percentage of students who had sexual intercourse for the first time before age 13	7.0	10.0	4.0	9.0	6.0	8.0	4.0	4.0	21.0	15.0
Of students who had sexual intercourse during the past three months, % who had used a condom during last sexual intercourse	63.0	69.0	57.0	74.0	60.0	64.0	59.0	61.0	72.0	--
Percentage of students who had sexual intercourse with four or more people during their lives	14.0	16.0	11.0	8.0	10.0	17.0	21.0	10.0	32.0	17.0

Figure 5.

Sexual Behaviors Among Youth Grades 9th-12th Michigan vs. United States, 2003

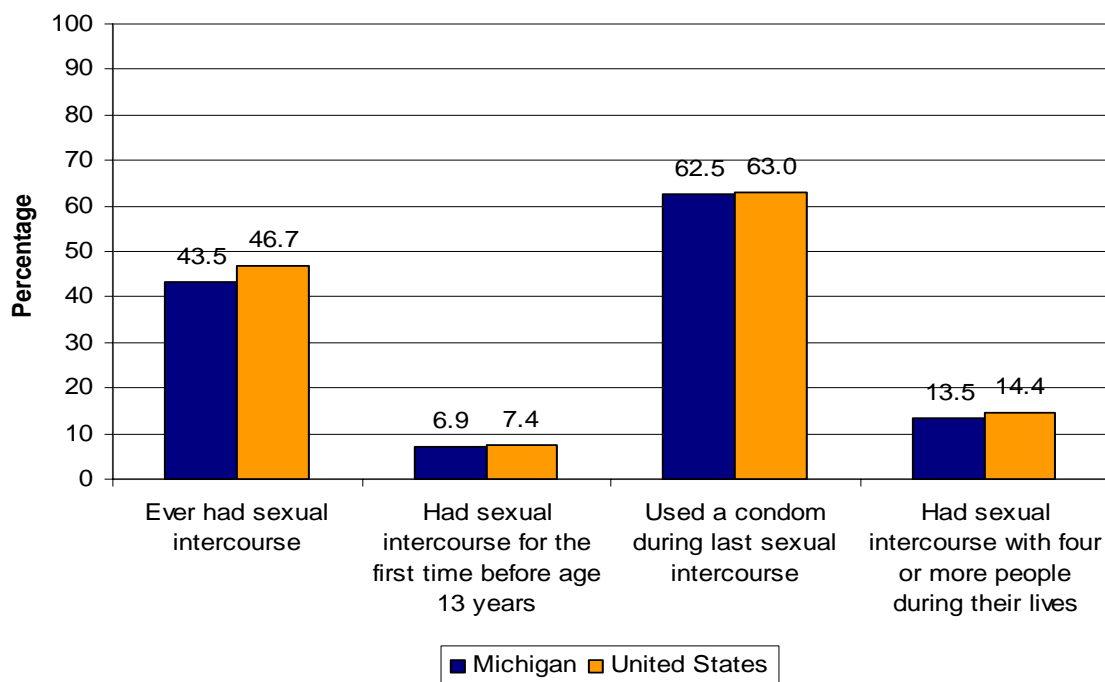
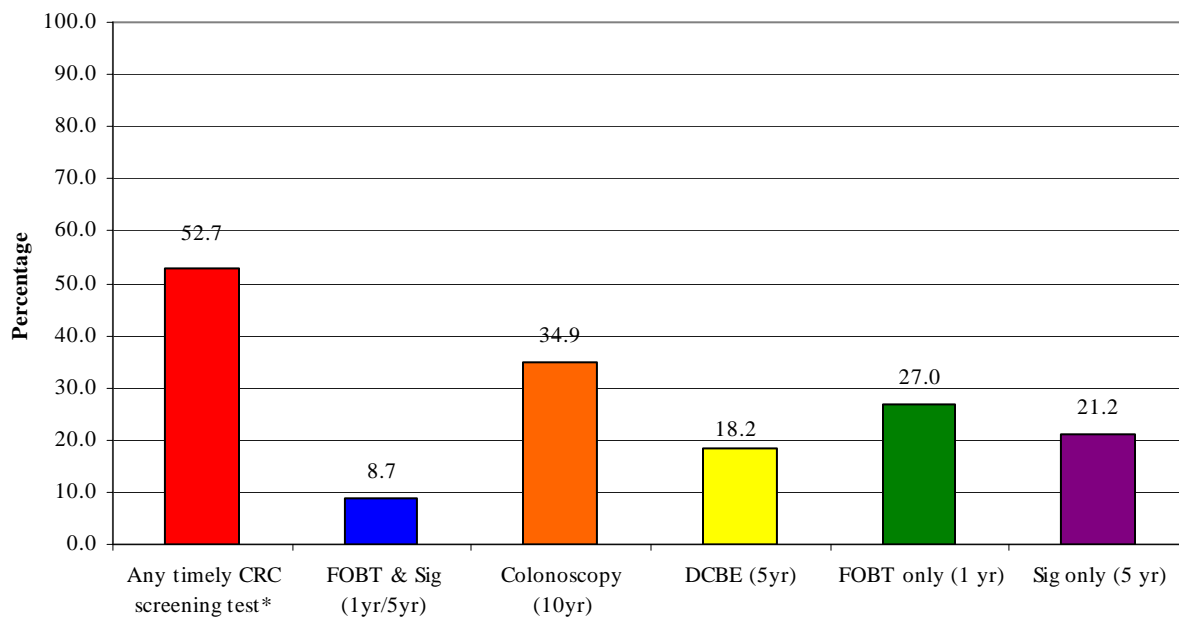


Figure 6.

Colorectal Cancer Screening Among Michigan Residents Aged 50 Years or Older, 2004**



* Any timely CRC screening test includes a FOBT every year or a flexible sigmoidoscopy every 5 years or a FOBT every year and a flexible sigmoidoscopy every 5 years or a colonoscopy every 10 years or a DCBE every 5 years

**Respondents whose last test was done because of a problem were not included in this analysis.

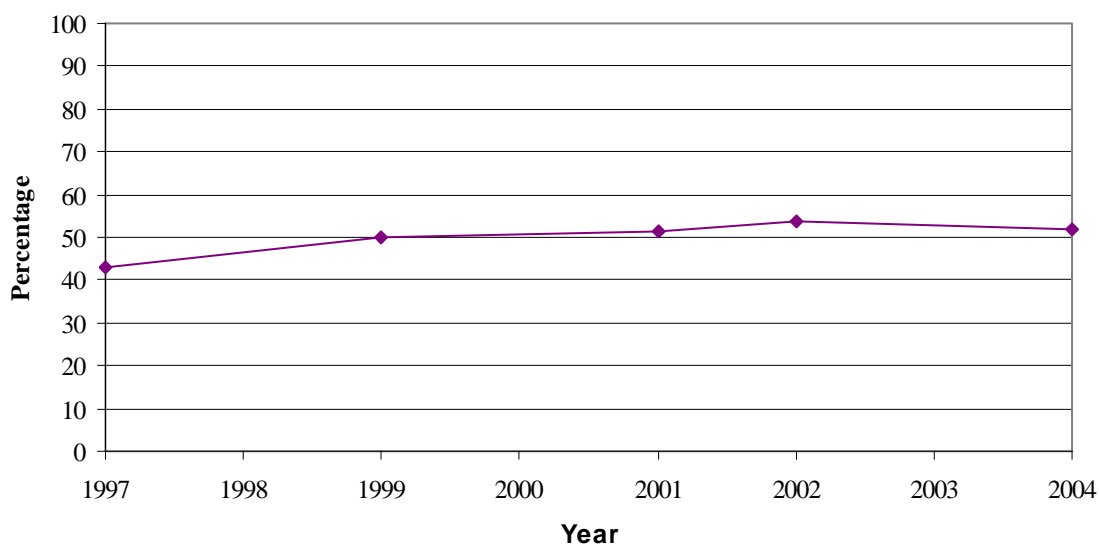
Table 2.

Colorectal Cancer Screening Among Residents Aged 50 Years or Older by Population Group, Michigan 2004**

Colorectal Cancer Screening Exam	General Population (%)	African American (%)	American Indian (%)	Hispanic (%)	Arab American (%)	Asian American (%)
Fecal Occult Blood Test (FOBT) in the past year	27.0	23.7	32.7	16.3	16.6	26.8
Sigmoidoscopy in the past five years	21.2	31.1	27.5	23.1	13.3	18.6
Sigmoidoscopy in the past five years and FOBT in the past year	8.7	10.5	11.3	7.9	8.6	9.9
Colonoscopy in the past ten years	34.9	37.7	31.9	28.9	34.8	15.4
Double Contrast Barium Enema (DCBE) in the past five years	18.2	30.6	11.8	17.8	23.9	11.6
Any timely colorectal cancer screening test*	52.7	53.4	54.6	33.0	46.3	38.6
* Any timely CRC screening test includes a FOBT every year or a flexible sigmoidoscopy every 5 years or a FOBT every year and a flexible sigmoidoscopy every 5 years or a colonoscopy every 10 years or a DCBE every 5 years **Respondents whose last test was done because of a problem were not included in this analysis.						

Figure 7.

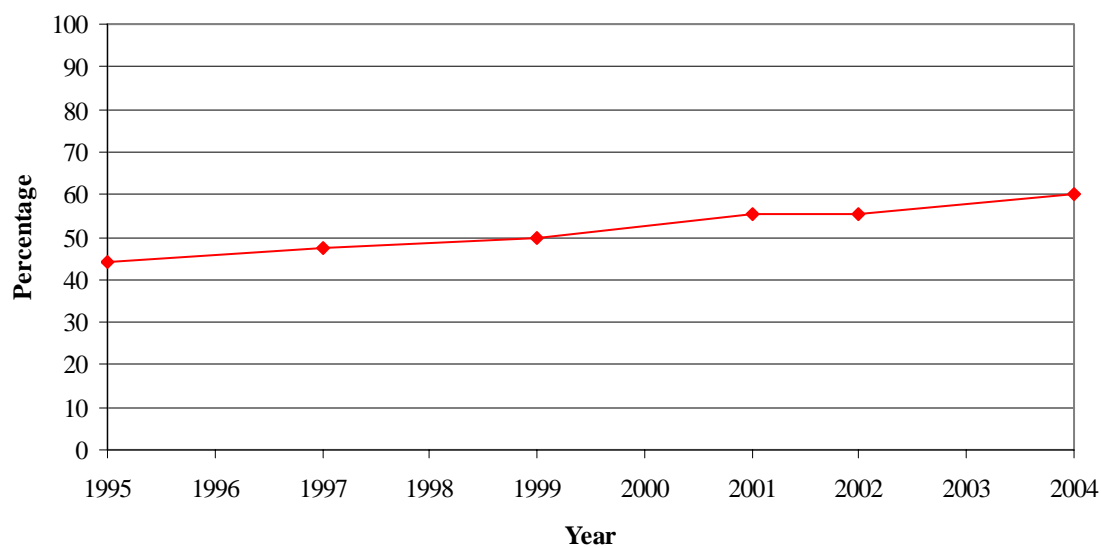
Comparison Across Survey Years of the Percentage of Michigan Residents Aged 50 Years or Older Who Ever Had a Fecal Occult Blood Test (FOBT)



Year	Ever Had an FOBT (%)
1997	42.9
1998	(Not asked)
1999	50.2
2000	(Not asked)
2001	51.2
2002	53.6
2003	(Not asked)
2004	51.9

Figure 8.

Comparison Across Survey Years of the Percentage of Michigan Residents Aged 50 Years or Older Who Ever Had a Lower Gastrointestinal Endoscopic Exam

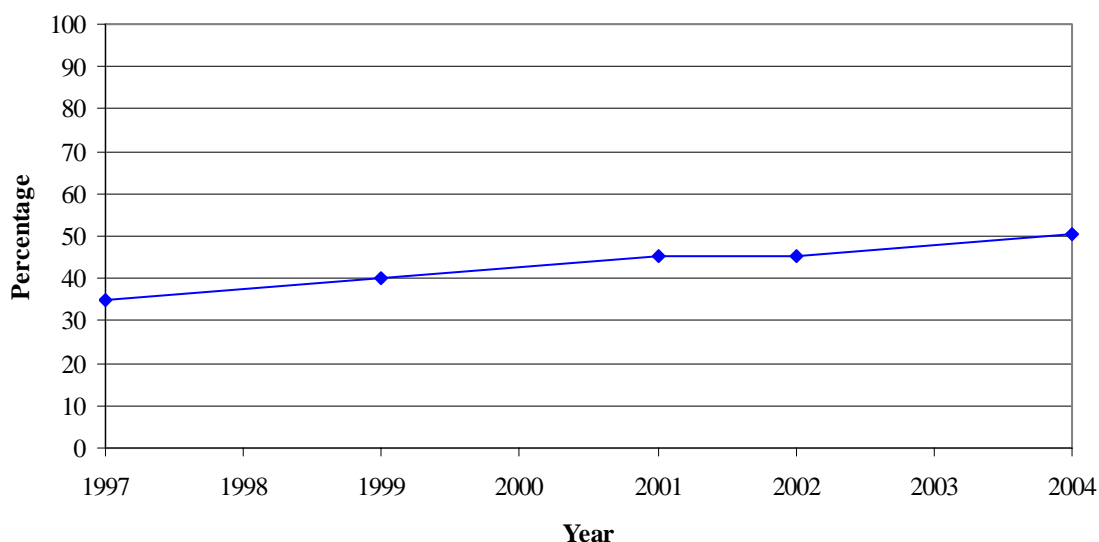


Year	Ever Had a Lower Gastrointestinal Endoscopic Exam* (%)
1995	43.9
1996	(Not asked)
1997	47.6
1998	(Not asked)
1999	49.7
2000	(Not asked)
2001	55.2
2002	55.6
2003	(Not asked)
2004	60.3

*Questions differ slightly over time: 1997—Ever had a sigmoidoscopy or proctoscopy; 1999, 2001, 2002, 2004—Ever had a sigmoidoscopy or colonoscopy

Figure 9.

Comparison Across Survey Years of the Percentage of Michigan Residents Aged 50 Years or Older Who Had a Lower Gastrointestinal Endoscopic Exam within the Past Five Years*



Year	Had a Lower Gastrointestinal Endoscopic Exam Within the Past 5 Years* (%)
1997	35.0
1998	(Not asked)
1999	40.0
2000	(Not asked)
2001	45.2
2002	45.2
2003	(Not asked)
2004	50.4

*Questions differ slightly over time: 1997—Had a sigmoidoscopy or proctoscopy within 5 years; 1999, 2001, 2002—Had a sigmoidoscopy or colonoscopy within 5 years

Figure 10.

Percentage of Adults Aged 40 Years or Older Who Are Current
Smokers by Population Group,
Michigan 2004

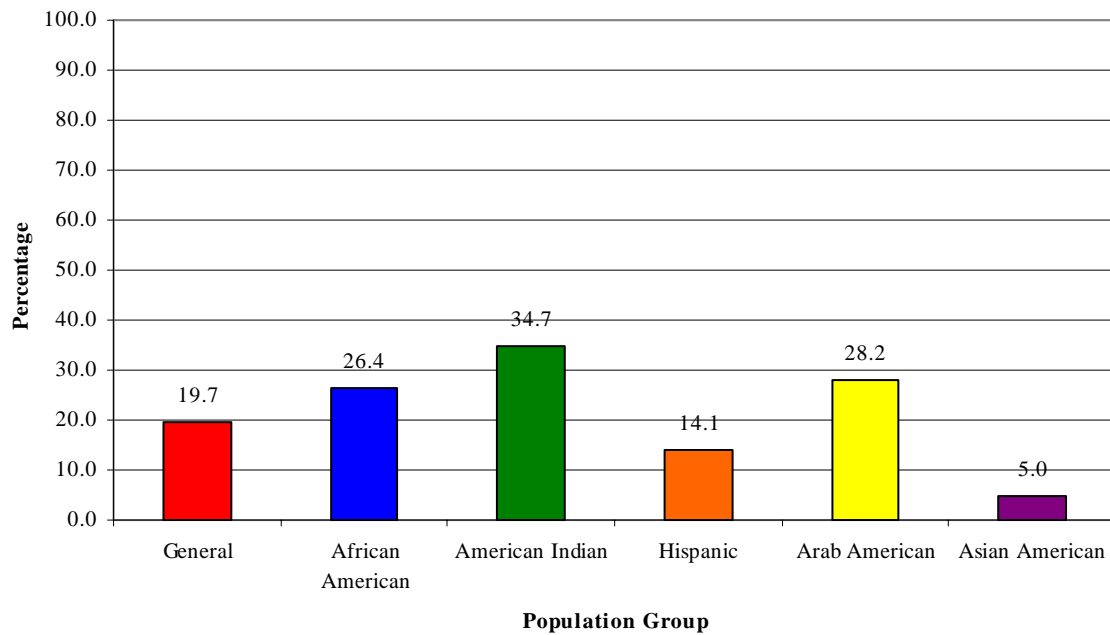
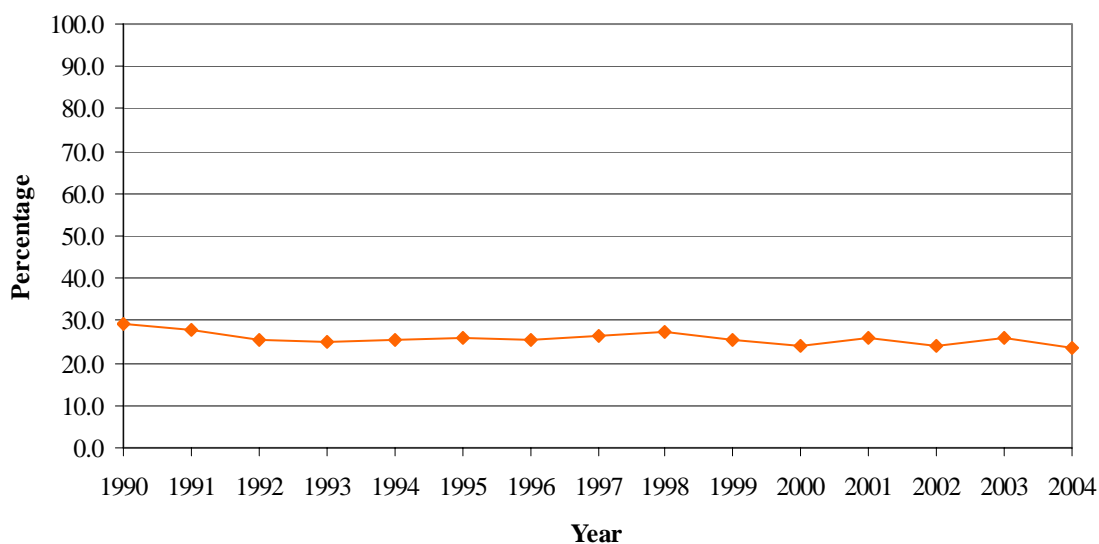


Figure 11.

Comparison Across Survey Years of the Percentage of Michigan Residents Aged 18 or Older Who Are Current Smokers*

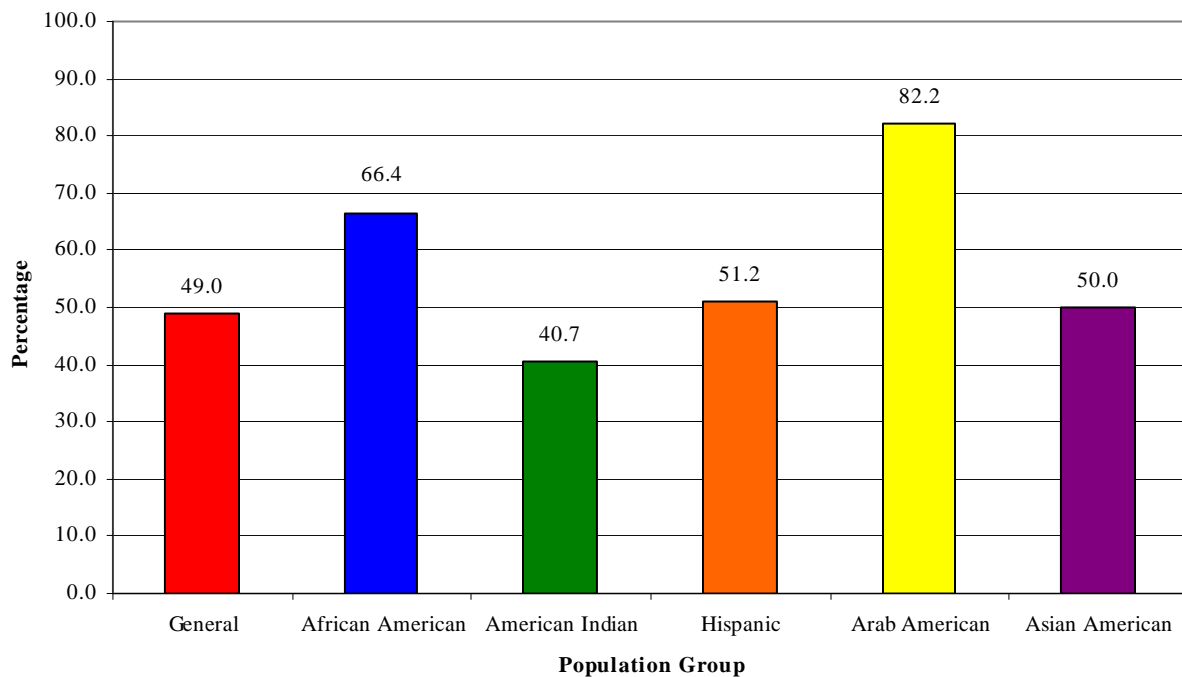


Year	Current Smokers* (%)
1990	29.2
1991	27.9
1992	25.5
1993	25
1994	25.4
1995	25.9
1996	25.6
1997	26.2
1998	27.5
1999	25.7
2000	24
2001	26.1
2002	24.1
2003	25.8
2004	23.4

*Current smoking defined as having smoked 100 or more cigarettes in lifetime and smoke on some days now

Figure 12.

Percentage of Current Smokers Who Attempted to Quit in the Past Twelve Months Among Michigan Residents Aged 40 Years or Older by Population Group, 2004*



*Current smoking defined as having smoked 100 or more cigarettes in lifetime and smoke on some days now; stopped smoking for at least one day in attempt to quit

Table 3.

Tobacco Use Indicators Among Michigan Youth, 2003

Behavior	Total (%)	Gender		Grades				Race		
		Male (%)	Female (%)	9 (%)	10 (%)	11 (%)	12 (%)	White (%)	Black (%)	Hispanic (%)
Percentage of students who ever tried cigarettes, even 1 or 2 puffs	60.2	61.0	60.0	53.0	58.0	65.0	67.0	59.0	66.0	70.0
Percentage of students who smoked a whole cigarette before age 13	21.3	22.0	20.0	23.0	20.0	21.0	20.0	22.0	16.0	26.0
Percentage of students who smoked cigarettes on 1 or more of past 30 days	22.6	21.0	24.0	18.0	20.0	23.0	31.0	25.0	10.0	32.0
Percentage of students who smoked cigarettes on 20 or more of past 30 days	11.3	12.0	11.0	7.0	8.0	12.0	19.0	13.0	3.0	14.0
Percentage of students who smoked 2 or more cigarettes per day on days they smoked during past 30 days	15.9	16.0	16.0	12.0	13.0	17.0	24.0	18.0	5.0	18.0
Of students who were <u>current smokers</u> , percentage tried to quit smoking in the past 12 months	58.4	55.0	62.0	60.0	60.0	55.0	60.0	58.0	--	--
Percentage of students who smoked cigars, cigarillos, or little cigars on 1 or more of past 30 days	13.6	19.0	8.0	12.0	10.0	14.0	20.0	14.0	11.0	21.0
<u>Current smokers</u> 18 years and less who purchased cigarettes at a store or gas station during the past 30 days	18.0	24.0	14.0	13.0	13.0	23.0	--	17.0	--	--

Figure 13.

Tobacco Use Indicators Among Youth
Grades 9th-12th
Michigan vs. United States, 2003

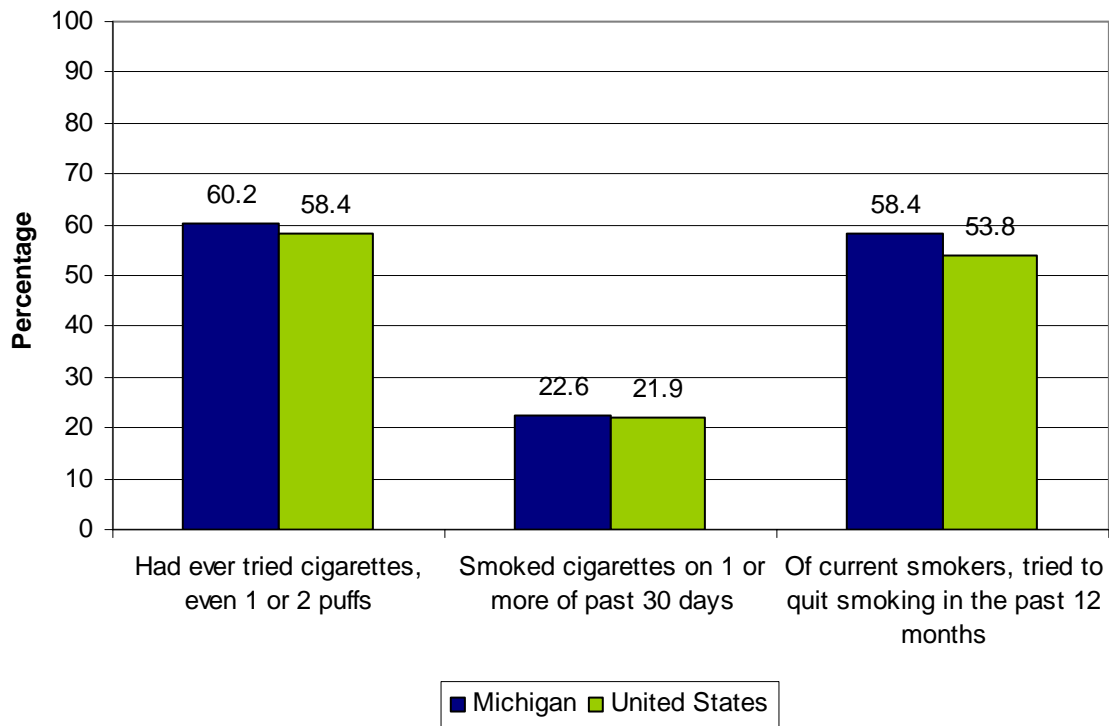
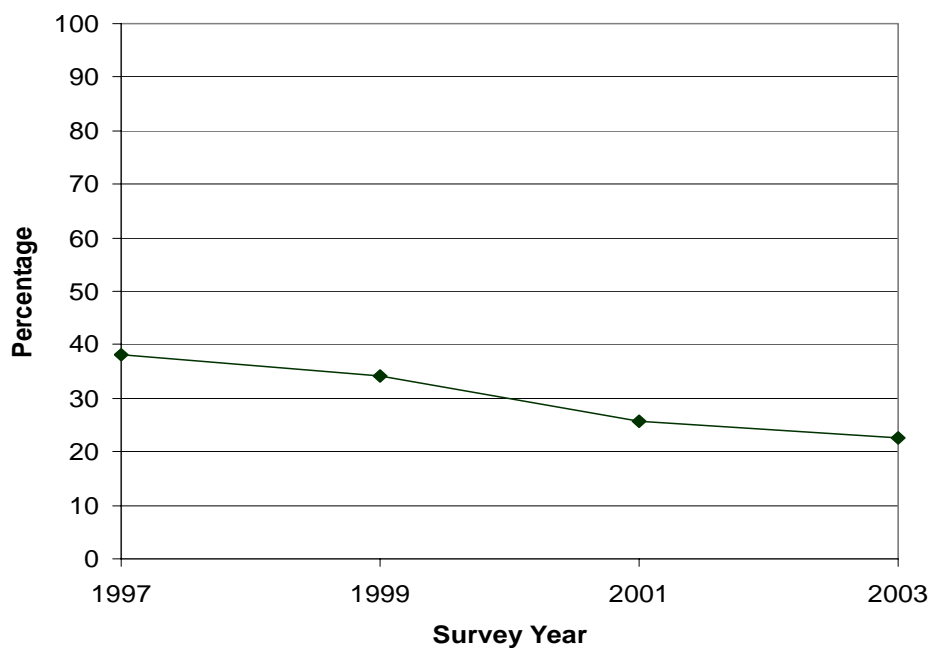


Figure 14.

Comparison Across Survey Years of the Percentage of Michigan Youth Grades 9-12 Who Are Current Smokers



Year	Current Smokers* (%)
1997	38.2
1999	34.1
2001	25.7
2003	22.6

*Current smoking defined as having smoked cigarettes on one or more days in the past 30 days

Figure 15.

Percentage of Michigan Men Aged 40 Years or Older Who Ever
Had a Prostate Specific Antigen (PSA) Test
by Population Group, 2004

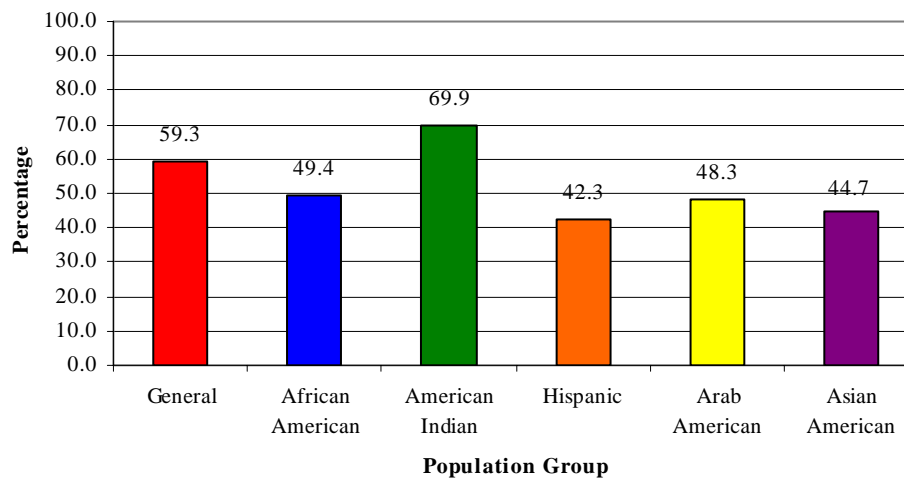


Figure 16.

Percentage of Michigan Men Aged 40 Years or Older Who
Discussed Prostate Specific Antigen (PSA) Testing with Their
Doctor by Population Group, 2004

